

**REMARKS**

Reconsideration of the above-mentioned application is hereby requested in view of the above amendments and remarks which follow. Applicants appreciate the Examiner's thorough consideration of the application.

In response to the examiner's rejection of the claims 23-27 under 35 USC 112, second paragraph. Applicant has amended claim 23 to now depend from claim 8, and Applicant believes that this amendment overcome the examiner's rejection.

The Examiner has again rejected claim 11 under 35 USC 103(a) as being unpatentable over US 5,472,719 (Favre) in view of US 6,752,070 (Lin). The Applicants cannot agree with the Examiner's interpretation of the cited prior art documents, and it is respectfully submitted that claim 11 is non-obvious over the cited documents.

The filter assembly of Lin has a completely different design and functioning compared to the device of the invention as claimed in claim 8. In the filter assembly of Lin, hot water brought from a hot water reservoir flows in to a filter cup 6 containing coffee powder. The made coffee then flows through meshed openings (61) in the bottom of the filter cup (6) and through the central hole (52) in a silicon rubber member (5) into a well section (31) in the lower container (3). When the well (31) is full (i.e. the level of coffee in the well is above the level of the entry into the flow paths provided by the grooves (32)) the coffee runs along the paths (32) and out of the outflow orifices (33).

The functioning of the Lin filter assembly is such that the coffee flows under atmospheric pressure from the cup (6) through the central hole (52) into the central well 31, surrounded by ridges (not numbered in Lin) and then the coffee flows to the outflow orifices once there is sufficient coffee in the well (31), with the aim of providing good flow of coffee into cups under the exit orifices (33). Thus in Lin coffee flows into the well and then flows from the well, via the paths (32), into the outflow orifices, and out of the device.

As seen clearly in Figure 3 of Lin, the part of the ridge (unnumbered in Lin) that surrounds each outflow does not have any slot or opening therein.

So in Lin it is not possible to have part of the coffee flowing into the outflow orifice over the top of "lips" surrounding the outflow orifice, and part of the liquid flowing through slits in the "lips" surrounding the outflow orifice that reach down to the lowest point in the capsule carrier, i.e. so that part of the liquid exits via the slots in the "lips" around the outflow opening into the outflow opening at the lowest point. Whereas the features of the device of the present invention as claimed in claim 8 of "a bottom wall comprising an outflow channel surrounded by lips which protrude upwards with respect to a lowest point of the lower cavity portion and wherein the upward protruding lips surrounding the outflow channel have openings in the form of slots or of holes enabling the liquid to flow out from the capsule carrier at the lowest point" provides the important advantage of enabling a portion of the froth floating on the surface of the liquid coffee in the cavity portion (7b) to enter the outflow channel over the top of the upwardly protruding lips and empty out of the apparatus at the same time as liquid without froth, which enters the outflow channel through the slots or holes in the upwardly protruding lips surrounding the outflow channel extending to the lowest point of the lower cavity portion. This system advantageously makes it possible to optimize the froth obtained on the coffee, and at the same time allow a full evacuation of the liquid from the capsule carrier, in order to provide a good espresso coffee.

It is noted that in Lin the slits in the ridge surrounding the well (31) serve only to allow coffee present in the cup portion 3 to flow into the well for eventual exit from the filter assembly via the raised paths (32) and then the outflow orifices (33). They are not by any means slits in "lips" surrounding the outflow opening, as required in claim 8.

Furthermore, the openings in the ridge portion surrounding the well (31) do not reach the lowest point of the bottom cup (3), and anyway do not let liquid flow out from the cup (3) at the lowest point.

It is further noted that, the design of the Lin filter assembly, with a central well (31) designed to receive made coffee dripping from a filter cup (6), is not compatible with the system of Favre, designed for the preparation of **espresso** coffee from hermetically closed

capsules under the injection of water **under pressure**, in which such a well system as described in Lin is undesirable.

The Examiner has now rejected claims 4, 7 and 18-28 under 35 USC 103(a) as being unpatentable over Fond '595 in view of Fond '987. The Applicant cannot agree with the Examiner's interpretation of the cited documents, and it is respectfully submitted that all the claims 4, 7 and 18-28 are non-obvious over the cited documents.

Contrary to the present invention as claimed in claim 4, Fond '595 does not teach a process whereby a plurality of smooth holes distributed over the flexible membrane are perforated by the injection head. On the contrary Fond '595 teaches that the upper face of the cartridge should be torn open, so that water may enter into the capsule without resistance (see column 5, lines 4-16 of Fond '595). It is further described in Fond that the protruding elements may be orientated at an angle so as to increase the surface of the tears produced on the capsule membrane (column 5, lines 6-7). Further, Fond considers even the use of capsules which are completely open (column 4, lines 51-58). Accordingly Fond makes no discussion or teaching whatsoever of the preparation of smooth holes without tearing, as required by the present claims. The aim in Fond is simply to enable the water to be introduced into the capsule as easily as possible (see column 5, line 12). In the process as taught by Fond, the perforating elements tear the upper membrane, and accordingly, when water is injected onto this torn membrane, the membrane will be further ripped open and water will flow freely into the capsule. Accordingly in the process of Fond, whereby the upper membrane of the capsule is torn open, it is not possible for the ripped membrane to exert any pressure on the product in the capsule, and accordingly the process of Fond does not provide any of the advantages effect of the process of the present invention as claimed in claim 4, whereby the intact flexible membrane, having a plurality of small smooth holes distributed across it, confers an important advantage of ensuring an excellent distribution of water of the surface inside the capsule and prevents the formation of preferential flow channels in the product. Furthermore, the pressure exerted by the intact membrane also makes it possible to ensure that the counter-resistance to the flow of the liquid through the product remains high during the entire extraction cycle, which optimizes the extraction, and

makes it possible to achieve a richer flavour and a more thorough extraction of the all of the product contained in the capsule, and furthermore makes it possible to obtain a very good froth (see for example, page 3 lines 6-16 and page 7 lines 1-8 of the English translation of the corresponding PCT application PCT/IB2004/02016).

Indeed, the idea of using a flexible upper membrane of the capsule to resist partially the hydraulic pressure, to distribute the water injection inflow and to automatically adjust the compression of the product inside the capsule is not disclosed in Fond, and goes against the common technical knowledge and prejudice in the field, where it is taught that injected water should enter the capsule with the least resistance possible, the upper membrane merely serving to close the product within the capsule, without further function.

With respect to the Examiner's assertions concerning Fond '987, it is respectfully submitted that Fond '987 discloses only injection heads having a shape which is concave when viewed from the outside. The injection head shown in Figure 5, cited by the examiner has an overall concave shape when viewed from the outside. This is clearly recited in Fond '987. The Examiner's attention is brought to column 11, lines 61-64 of Fond '987 wherein it is specifically stated with reference to Figure 5 that "this member 51 comprises a **concave** zone 55 allowing an improved distribution of the water so that the upper surface of the sachet is forced against the concave zone".

Furthermore, it is noted that Fond '987 is directed to an extraction system for the extraction of coffee from flexible sachets, for which the considerations are completely different to an extraction from a rigid capsule. The process of Fond '987 works completely differently to that of the present invention, in Fond '987 water is injected into the flexible sachet under pressure, whereby the sachet swells under the effect of the injected water and the swelling of coffee in the flexible sachet, to be forced against the walls of the sachet holder, thereby providing a pre-moistening of the coffee. This is contrary to the process of the present invention wherein the flexible membrane closing the capsule deforms under the pressure of the injected water and moves away from the injection head, exerting a pressure on the product contained in the capsule, and whereby the plurality of smooth distributed holes of

controlled size in the upper membrane ensure an excellent distribution of water over the substance inside the capsule and prevent the formation of preferential flow channels, and whereby the pressure exerted by the membrane makes it possible to ensure that the counter-resistance to the flow of the liquid through the product remains high during the entire extraction cycle, which optimizes the extraction, and makes it possible to achieve a richer flavour and a more thorough extraction of the product contained in the capsule.

The Examiner now rejects claims 8, 9 and 28 under 35 USC 103(a) as being unpatentable over Fond et al '987 in view of Fond et al '595. The Applicants cannot agree with the Examiner's analysis of the cited documents, and this objection is respectfully traversed.

As mentioned above, Fond '987 does not disclose a device including an injection head comprising a surface with a shape which is substantially curved and convex, as required by claim 8 and the claims dependent thereon. Indeed, Fond '987 describes only devices having injection heads which are concave when viewed from the exterior. Fond '987 specifically recites that the zone 55 referred to by the Examiner is concave. The Examiner attention is again drawn to column 11, lines 61-64 of Fond '987.

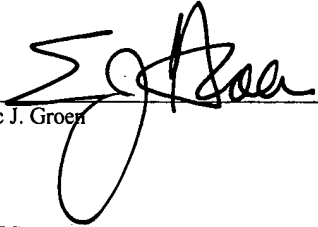
The claimed convex shape of the surface of the perforating surface of the injection head according to the present invention advantageously enables the good control of the pressure of the perforating points against the flexible membrane, and allows in this way the control of the perforation of the membrane in order to optimize the auto-regulation.

For all of the foregoing amendments and remarks, Applicants believe that claims 4, 7-11, and 18-28 are in condition for allowance and respectfully request early passage thereof.

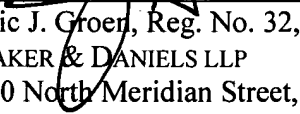
If necessary, Applicants request that this response be considered a request for an extension of time appropriate for the response to be timely filed. Applicants request that any required fees needed beyond those submitted with this response be charged to the account of Baker & Daniels, Deposit Account No. 02-0390 (979078.2).

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Reply to Office Action of March 4, 2010

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on August 4, 2010.

  
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